

HP Factory-Installed Operating System Software for Microsoft® Windows Server™ 2003 R2 User Guide



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Audience assumptions

This document is for the person who installs, administers, and troubleshoots servers and storage systems. HP assumes you are qualified in the servicing of computer equipment and trained in recognizing hazards in products with hazardous energy levels.

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Technical support

Before you contact HP

Be sure to have the following information available before you call HP:

- Technical support registration number (if applicable)
- Product serial number
- Product model name and number
- Product identification number
- Applicable error messages
- Add-on boards or hardware
- Third-party hardware or software
- Operating system type and revision level

HP contact information

For the name of the nearest HP authorized reseller:

- In the United States, see the HP US service locator webpage (http://www.hp.com/service_locator).
- In other locations, see the Contact HP worldwide (in English) webpage (<http://welcome.hp.com/country/us/en/wwcontact.html>).

For HP technical support:

- In the United States, for contact options see the Contact HP United States webpage (http://welcome.hp.com/country/us/en/contact_us.html). To contact HP by phone:
 - Call 1-800-HP-INVENT (1-800-474-6836). This service is available 24 hours a day, 7 days a week. For continuous quality improvement, calls may be recorded or monitored.
 - If you have purchased a Care Pack (service upgrade), call 1-800-633-3600. For more information about Care Packs, refer to the HP website (<http://www.hp.com>).
- In other locations, see the Contact HP worldwide (in English) webpage (<http://welcome.hp.com/country/us/en/wwcontact.html>).

Customer self repair

What is customer self repair?

HP's customer self-repair program offers you the fastest service under either warranty or contract. It enables HP to ship replacement parts directly to you so that you can replace them. Using this program, you can replace parts at your own convenience.

A convenient, easy-to-use program:

- An HP support specialist will diagnose and assess whether a replacement part is required to address a system problem. The specialist will also determine whether you can replace the part.
- For specific information about customer replaceable parts, refer to the maintenance and service guide on the HP website (<http://www.hp.com/support>).

HP customer support

HP customer support offers Software Support, Support Plus Software Support, and Integrated Hardware and Software Support services. For more information, see the following links:

- Software Support Services (<http://www.hp.com/hps/software>)—Three incidents and 9 x 5 standard telephone support are included for the operating system and a wide range of Microsoft® applications.
- Hardware Support (<http://www.hp.com/hps/hardware>)—A range of hardware support services are available for the server.
- Support Plus (<http://www.hp.com/hps/premium>)—One year of integrated hardware and software support is included for the server.
- 90-day getting started software telephone support—For ProLiant servers, technical advisory support, including installation assistance, is available for HP preinstalled third-party software from the HP website (<http://www.hp.com>) or by telephone for 90 days from the date of purchase.



IMPORTANT: Support applies only to the original HP hardware and software configuration shipped.

Overview

Introduction



IMPORTANT: If your server has a factory-installed operating system, do not boot from the HP SmartStart CD when powering up the server for the first time. The SmartStart CD should only be used if it is necessary to reinstall the operating system.



IMPORTANT: Complete the operating system installation before installing any additional hardware options.

This guide provides instructions for completing the installation of the following factory-installed operating systems:

- Microsoft® Windows Server™ 2003 R2, Standard Edition operating system with five CALs
- Microsoft® Windows Server™ 2003 R2, Compute Cluster Edition (x64)

Features

The operating system is preloaded on the server disk drive before the server is shipped to you. Also, the latest drivers are downloaded onto the server disk drive and integrated with the preloaded operating system.

The normal server operating system installation process is shortened for a preloaded server operating system. This installation requires approximately 25 minutes, compared to the normal CD installation time of 90 minutes. The user-specific information such as the server name, IP address, and regional settings must be entered during the installation process.

The HP factory-installed software for Microsoft® Windows Server™ 2003 R2 is:

- Ready to run. You are guided through a mini-setup wizard, after which any HP specific components are installed and, when possible, configured. After any required restarts of the operating system, the Microsoft® Windows Server™ 2003 R2 installation is complete and ready to perform any necessary user configuration.
- Preconfigured with the networking protocol TCP/IP. This service is required for effective network management.
- Pre-activated. HP has configured the operating system so that customer activation is not required.
- Preconfigured with NTFS. Many new features in Microsoft® Windows Server™ 2003 R2 require NTFS, including the ability to promote the server to a domain controller to use Microsoft® Active Directory. NTFS also offers greater security. Review the Microsoft® Windows Server™ 2003 R2 software documentation to properly configure the server and to understand how to use NTFS with Microsoft® Windows Server™ 2003 R2, while concurrently using previous versions of Microsoft® Windows NT® in a network infrastructure.

For additional information about Microsoft® Windows Server™ 2003 R2, see the HP website (<http://h18000.www1.hp.com/products/servers/software/factory-installed.html>) or the Microsoft website (<http://www.microsoft.com/windowsserver2003>).

Gathering information

Certificate of Authenticity



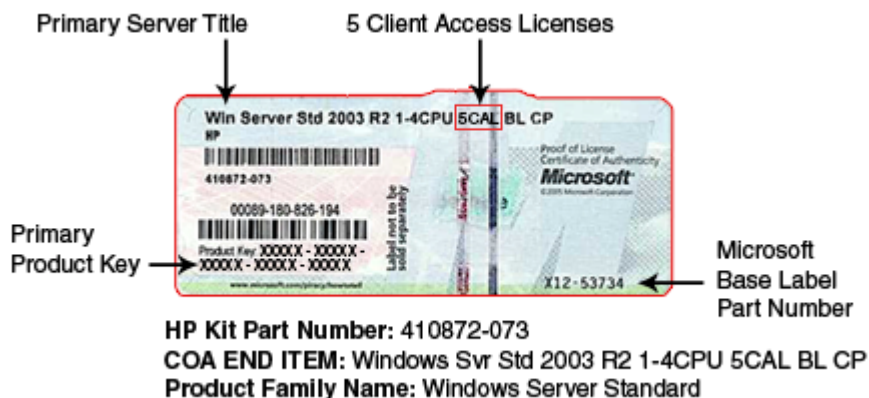
IMPORTANT: Note where the COA label is located on the server, and record the product key for future reference.

The COA label is used to:

- Upgrade the factory-installed operating system using the Microsoft® Upgrade program for license validation
- Reinstall the operating system because of a failure that has permanently disabled it

The COA label location varies by server model. On rack-mounted server models, the COA label is located either on the front section of the right panel or on the right front corner of the top panel. On tower models, the COA label is located toward the rear of the top panel of the server.

See the following figure to identify the information on the COA label.



NOTE: The product key is not needed at the time of the initial operating system installation because the server comes from the factory with a product key already installed.

The COA label is most easily accessible when the server is initially installed. Record the product key in the space provided.

<p>Your Server's Product Key</p> <hr/>
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Installation

Completing the operating system installation



IMPORTANT: Before powering up the server and configuring the operating system software, connect the server hardware as described in the server user guide. Do not install additional hardware devices until after the software installation is complete.



IMPORTANT: If the system prompts you for an installation path for files to be copied during the installation of additional hardware or software components, enter the path `C:\Windows Server 2003 R2\I386` for the original files. If the system prompts you for HP driver files, enter the path `C:\HPDRVRS`. Driver files are located in subdirectories in this path. To view the directory, click **Browse**.



IMPORTANT: To successfully complete the software installation, TCP/IP services must be installed and the server must be connected to an active network connection.

To complete the installation of the factory-installed operating system and configure the server:

1. Power up the server.
2. At the HP Welcome screen, press the appropriate key to continue. The server software license screen appears.
3. Read all software license agreements provided with the server, and press the appropriate key to accept the license agreements.
4. Select the **Typical** or **Custom** disk space option. The Typical option sets the partition size to 8 GB, and the Custom option enables you to set the partition size from at least 8 GB to the maximum disk capacity.
5. Follow the online prompts. Several status screens appear during the software installation, describing the process.



CAUTION: The server requires a reboot at the end of the installation. Do not power down the server at any time during the installation process. Any power interruption during the installation process could prevent proper completion of the installation and prevent the operating system from restarting.

NOTE: You can view and print the EULA after the installation is completed by clicking **Start** and selecting **All Programs>Pre-Install Features>EULA**.

Signed drivers

During the installation of the operating system, caution messages concerning unsigned software drivers might appear. The caution message states, "Digital signature is not found," when drivers are about to be installed. When prompted, click **Yes** to accept the drivers and continue the installation. If you are

prompted to reboot the server, click **No**. After the operating system installation is complete, download digitally signed drivers (<http://www.hp.com/support/files>).

Found New Hardware Wizard

The Found New Hardware Wizard might appear during the operating system installation. Click **Cancel** at the Found New Hardware Wizard. Do **not** attempt to proceed with the installation of drivers until after the second login when the operating system is fully installed.



IMPORTANT: Do **not** attempt to install the drivers during the operating system installation because the server might automatically reboot before the driver installation has been completed. This action could result in the incorrect installation of a device.

To install drivers after the operating system installation is complete:

1. Click **Next** at the Found New Hardware Wizard window.
2. Select **Search for a Suitable Driver for My Device**.
3. Select **Specify a Location**, and clear the **Floppy Drive** and **CD-ROM** options.
4. Click **Next**.
5. Enter the following path in the textbox:
C:\HPDRVRS
6. Click **OK**.
7. Click **Next** at the Driver Files Search Results screen.
8. Click **Finish** to complete the Found New Hardware Wizard.

The setup process begins. Allow the entire setup process to complete, including any requested restarts, before interrupting this process or powering down the server. After the initial setup is complete, the server can be configured to your individual needs.



IMPORTANT: The system might complete the driver installation after the first login. Do not perform any actions on the Manage Your Server screen. If additional drivers are loaded, the system completes the driver installation and automatically reboots. The next time the system presents a login prompt, log in normally and use the new operating system.

Automatic configuration

Some parts of the setup process are automatically configured, and these screens do not appear. In the future, for information about changing any preconfigured information, refer to the operating system online help. Of the screens that are automatically configured, the following might require later changes:

- **Licensing mode**—The server licensing mode is set to per-device or per-user with a five device or user count. To change the licensing mode to per-server after the initial operating system installation is completed, refer to "Changing licensing mode (Standard Edition only) (on page 13)." If additional licenses were purchased, apply the additional licenses after the initial operating system installation completes. For information about adding licenses, refer to the online help or the operating system documentation.
- **Administrator password**—The administrator password has been intentionally left blank. Set the password immediately after the software installation is complete. Do not change the administrator password during the initial setup when entering the computer name because changing the password at this time can cause the automated installation process to abort. For procedures to change the

administrator password after the installation has been completed, refer to "Changing the administrator password (on page 12)."

- Dynamic disk upgrade—The operating system is preinstalled on an approximately 8-GB partition. On an array controller, the logical drive size is set to the maximum size of the drive. Three to 7 MB of space is available on the logical drive of array controllers to support a dynamic disk upgrade.

NOTE: The dynamic disk upgrade is optional. For information about dynamic disk upgrades, refer to the operating system documentation. After upgrading to dynamic disk, the emergency repair disk must be updated.

Post-installation tasks

Logging in to the server

To log in to the server after completing the initial software installation:

1. Press the **Ctrl+Alt+Del** keys to display the login screen.
2. Enter the user name **Administrator**.
3. Leave the Password field blank.
4. Click **OK**.

Changing the administrator password

The administrator password can be changed by pressing the **Ctrl+Alt+Delete** keys and clicking **Change Password** or by completing the following steps:

1. Click **Start**, and select **All Programs>Administrative Tools>Computer Management**.
2. Expand the **System Tools** directory, and then expand the **Local User and Groups** directory.
3. Select the **Users** folder.
4. Right-click **Administrator**, which appears on the right side of the window, and select **Set Password**. A warning message appears.
5. Click **Proceed** to continue.
6. Enter the new password in the New Password field, and reenter it in the Confirm Password field.
7. Click **OK**.
8. Click **OK** to complete the process.



CAUTION: Do not lose or forget the administrator password. This password is required to reconfigure the server.

For more information about changing the administrator password, refer to the operating system documentation.

Altering regional settings

Alter the regional settings if the server is not operating under the default regional settings. The regional settings control the keyboard language and set the local format for sorting and displaying time, date, numbers, and currency for a specified region.

1. Click **Start**, and select **Control Panel**.
2. Double-click **Regional and Language Options**.
3. Click the **Regional Options** tab.
4. Select the correct locale from the two dropdown lists.

5. Click the **Languages** tab, and then click **Details**.
6. Click the **Settings** tab at the Text Services and Input Languages window.
7. Select the checkbox next to the correct language setting.
8. Click **Add** to select another input language.
9. Select the correct Input Language and Keyboard Layout/IME at the Add Input Language window.
10. Click **OK**.
11. Select the correct Default input language from the dropdown list.
12. Click **OK** to exit the Text Services and Input Languages window.
13. Click **OK** to exit the Regional and Language Options window.

Changing licensing mode (Standard Edition only)

To change the server licensing mode from per-device or per-user to per-server:

1. Start license logging services:
 - a. Click **Start**, and select **All Programs>Administrative Tools>Services**.
 - b. Right-click **License Logging**, and then select **Properties**.
 - c. Select **Manual** at the Startup type field.
 - d. Click **OK**.
2. Click **Start**, and select **Control Panel**.
3. Double-click **Licensing**. The Choose Licensing Mode window appears.
4. Click **Per Server**. Select **Microsoft® Windows® Server** from the dropdown product list.
5. Click **Add Licenses**. The New Client Access License window appears.
6. Enter the quantity of additional CALs that have been purchased.
7. Click **OK**. The Per Server Licensing window appears.
8. If you agree to the terms of the license agreement, select the **I agree that** checkbox, and then click **OK** to continue.
9. Click **OK** to exit the Choose Licensing Mode window.

Removing licenses in per-server mode

1. Click **Start**, and select **Control Panel**.
2. Double-click **Licensing**. The Choose Licensing Mode window appears.
3. Click **Remove Licenses**. The Select Certificate to Remove Licenses window appears.
4. Enter the quantity of CALs to remove in the Number of Licenses to Remove field, and then click **Remove**.
5. Click **Yes** at the License System window.
6. Click **Close>OK** to exit the Choose Licensing Mode window.

Installing Microsoft Internet Information Service



IMPORTANT: The server must be connected to an active network connection to complete the installation of networking components, such as Microsoft® Internet Information Service and Active Directory.

1. Click **Start**, and select **Control Panel**.
2. Double-click **Add or Remove Programs**.
3. Click **Add/Remove Windows Components** to launch the Microsoft® Windows® Components wizard.
4. Select **Application Server**, and then click **Details**.
5. Select **Internet Information Services**.
6. Click **OK**.
7. Click **Next** to begin the Microsoft® Internet Information Services installation.
8. Click **Finish** to complete the installation, and then close the Add or Remove Programs window.

Installing additional Microsoft® Windows Server™ 2003 R2 software

1. After you have completed the operating system installation and initially logged in to the server, reboot and log in to the server again.
2. From the desktop, double-click **Windows Server 2003 R2**.
3. At the welcome screen, click **Continue Windows Server 2003 R2 Standard Edition Setup**.
4. Click **Next**.
5. Read the license agreement. If you agree to the terms of the license agreement, select **I accept the terms in the license agreement**, and click **Next** to continue.
6. Click **Next**.
7. Click **Finish**.
8. At the welcome screen, click **Exit** to close the utility.

Configuring the disk drives

The primary logical drive, which contains the operating system, is the only drive on the server that is configured during the operating system installation. Additional space that is not partitioned is also located on the primary drive. This nonpartitioned space and any additional disk drives on the server must be partitioned and formatted using Disk Administrator before they can be available for use.

1. Click **Start**, and select **All Programs>Administrative Tools>Computer Management**.
2. Expand the **Storage** directory, and then select **Disk Management**. The disk and logical drive information appears on the right side of the window.
3. Click **Action**, and then click **Rescan Disks** if the new logical drive created by the ACU does not appear on the bottom right side of the Computer Management window as unallocated space.
4. Right-click **Disk 1** on the bottom right panel, which displays a small red circle on the disk icon, and then select **Initialize Disk**.

5. Select **Disk 1**, and then click **OK** on the Initialize Disk screen. The small red circle is now gone, and the disk is identified as a Basic disk.
6. Right-click the box containing the disk size amount, which is labeled "Unallocated," and then select **New Partition**.
7. Click **Next** at the New Partition Wizard screen.
8. Select either **Primary** or **Extended Partition**, and then click **Next** at the Select Partition Type screen.
9. Click **Next** to use the maximum disk space, or enter the amount you want for the partition size at the Specify Partition Size screen.
10. Click **Next** to accept the drive letter assigned by default at the Assign Drive Letter or Path screen. The Format Partition screen appears.
11. To format the drive, select the appropriate file system format (the default selection is NTFS) and the Allocation Unit Size, and then either enter the Volume Label or accept the default label.
12. (Optional) Select **Perform a quick format** and **Enable file and folder compression**.
13. If the drive will not be formatted, select **Do not format this partition**.
14. Click **Next**.
15. Click **Finish** at the Completing the New Partition Wizard screen. The partition is formatted to the file system that was selected and is labeled "Healthy" at the completion of the format.

For more information on configuring the new disk drives and upgrading to dynamic disks, refer to the operating system documentation.

Creating an additional page file

When additional memory or software applications are installed on the server, errors can occur in the event log, indicating that the C drive is nearing capacity. To solve this problem, move applications located on the C drive to another partition or create a page file. Creating the page file on a separate partition to support the amount of memory in the server is the most efficient solution.

After an additional page file has been created, set the page file on the boot partition to the amount of memory in the server. For additional information about creating page files, refer to the Help file, which can be accessed by clicking **Start** and selecting **Help and Support**.

Installing tape drives

If a tape drive was purchased for the server, support for the tape drive might need to be installed manually.

1. Click **Start**, and select **All Programs>Administrative Tools>Computer Management>Device Manager**. Device Manager displays all of the devices on the right side of the screen.
2. Select the tape device. The tape drive is listed in the Other Devices category under the ? (question mark) icon, which indicates an unknown device, until the correct driver is installed.
3. Right-click the tape device, and then select **Properties**.
4. Click the **Driver** tab, and then click **Update Driver**. The Update Device Driver Wizard begins.
5. Click **Next**.
6. Select **Search for a suitable driver for my device**.
7. Click **Next**.

8. Select **Specify a location**, and clear all other options.
9. Click **Next**.
10. Enter the following path in the Device Driver Wizard field:
C:\HPDRVRS
11. Click **OK**. The driver search results should display the appropriate device.
12. If an incorrect device appears, click **Back**, and reselect the correct device.
13. Click **Next** to install the driver.
14. Click **Finish>Close** to return to the Computer Management screen.

The tape driver installation is complete. The tape device now appears in the Tape Drive category on the Computer Management screen.

Medium changer

If the tape drive has a medium changer, the medium changer is listed on the Computer Management screen as an Unknown Medium Changer until the correct driver is installed. To install the driver for the medium changer:

1. Select **Unknown Medium Changer** from the Medium Changers category in the Computer Management screen device list.
2. Right-click the device, and then select **Properties**.
3. Click the **Driver** tab, and then click **Update Driver**. The Update Device Driver Wizard begins.
4. Click **Next**.
5. Select **Search for a suitable driver for my device**.
6. Click **Next**.
7. Select **Specify a location**, and clear all other options.
8. Click **Next**.
9. Enter the following path in the Device Driver Wizard field:
C:\HPDRVRS
10. Click **OK**. The driver search results should display the appropriate device.
11. If an incorrect device appears, click **Back**, and reselect the correct device.
12. Click **Next** to install the driver.
13. Click **Finish>Close** to return to the Computer Management screen.

Installing client printer drivers

The client printer drivers are preinstalled in the Printers directory located on the disk drive. When installing printer support for client operating systems, supply the path C:\PRINTERS. For additional information about installing drivers for network shared printers, refer to the "Printers and Faxes" section of the help file, which can be accessed by clicking **Start** and selecting **Help and Support**.

Event log errors

After the ProLiant Installation Utility is complete, event log error messages related to certain controller drivers might appear. These messages are expected at this time and do not affect the performance of the server or the operating system. Possible messages include:

Unable to read IO control information from NBT device. Refer to article #Q257760 on the Microsoft® website (<http://www.microsoft.com>).

Backing up the server

After you complete the software installation and the server is operational, back up the server using a tape backup system in conjunction with approved tape backup software.

Configuring network protocols

The TCP/IP services are automatically installed. Microsoft® Windows Server™ 2003 R2 requires TCP/IP to be enabled.

Setting up Remote Access Server

To use the RAS service with an installed modem:

1. Click **Start**, and select **Control Panel**.
2. Double-click **Network Connections**.
3. Double-click **Dial-up Connections>Make a New Connection**.
4. Select the network connection type, and complete the rest of the setup as prompted.

For more information on required networking parameters, refer to the operating system documentation.

Installing Java Virtual Machine

The Java™ Virtual Machine utility (<http://www.java.com>) might need to be downloaded and installed on your server to completely and properly view some web pages using Internet Explorer 6.0. For example, when viewing the Web Agent Help from the System Management Homepage, text that appears in the left column of the Help screen is not displayed properly if Java™ Virtual Machine is not installed.

Troubleshooting

Reinstalling the operating system

If the server operating system becomes corrupt, reinstall it by booting the server from the HP branded version of the Microsoft® Windows® operating system CD.

Acronyms and abbreviations

ACU

Array Configuration Utility

CAL

client access license

COA

Certificate of Authenticity

CPQTEAM

Network Teaming and Configuration

EULA

end user license agreement

iLO

Integrated Lights-Out

IP

Internet Protocol

NIC

network interface controller

NTFS

NT File System

PCI

peripheral component interface

PSP

ProLiant Support Pack

RAS

remote access service

RILOE

Remote Insight Lights-Out Edition

SNMP

Simple Network Management Protocol

TCP/IP

Transmission Control Protocol/Internet Protocol